

Product Datasheet

MMP INSULCAST 4

Brand Name: -	MMP INSULCAST 4	
Type	Low density insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Exfoliated Vermiculite	
Max Service Temp.	1000 °C	
Max Grain Size	6 mm	
Water Required for Casting	70-100%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	30.40	-
Fe ₂ O ₃ :	10.50	11.0 Max
CaO :	13.5	-
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	0.53	0.55Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	6	4 Min
Fired at 800°C/3hrs.	4	2 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	--	--
Permanent Linear Change (%)		
Fired at 800°C/3hrs.	-0.25	± 0.40 Max
Fired at 1000°C/3hrs.	-0.50	± 0.60 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.07	-
At 500°C	0.09	0.10 Max
At 800°C	0.12	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

The data shown are based on average results on production samples and are subject to normal variation on individual tests hence cannot be taken as specification. Max and min. values are given separately for testing purpose.

Water requirements indicated are based on laboratory test conditions. Actual water requirement may vary subject to site conditions. The properties shown are for vibratory cast material only unless specified otherwise. All values are based on test results on standard bars of size 160x40x40 mm. Test methods are guided by and based on various Indian Standards (IS).

Product Datasheet

MMP INSULCAST 7

Brand Name: -	MMP INSULCAST 7	
Type	Low density insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Exfoliated Vermiculite	
Max Service Temp.	1100 °C	
Max Grain Size	6 mm	
Water Required for Casting	40-70%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	33	-
Fe ₂ O ₃ :	7.50	8.50 Max
CaO :	16.0	-
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	0.82	0.85Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	15	12 Min
Fired at 800°C/3hrs.	9	4 Min
Fired at 1100°C/3hrs	12	6 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+12	12/1337 Min
Permanent Linear Change (%)		
Fired at 800°C/3hrs.	-0.25	± 0.80 Max
Fired at 1000°C/3hrs.	-0.56	± 1.20 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.15	-
At 500°C	0.17	0.18 Max
At 800°C	0.19	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 9 HS

Brand Name: -	MMP INSULCAST 9 HS	
Type	Medium Density Insulating Castable (High Strength)	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Exfoliated Vermiculite	
Max Service Temp.	1200 °C	
Max Grain Size	6 mm	
Water Required for Casting	35-40%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	40.50	40.0 Min
Fe ₂ O ₃ :	2.60	3.0 Max
CaO :	7.80	8.0 Max
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	0.98	1.00 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	25	20 Min
Fired at 800°C/3hrs.	15	8 Min
Fired at 1100°C/3hrs	20	15 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+14	14/1398 Min
Permanent Linear Change (%)		
Fired at 800°C/3hrs.	-0.30	± 0.60 Max
Fired at 1000°C/3hrs.	-0.55	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.24	-
At 500°C	0.26	0.28 Max
At 800°C	0.28	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 9

Brand Name: -	MMP INSULCAST 9	
Type	Medium Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Exfoliated Vermiculite	
Max Service Temp.	1200 °C	
Max Grain Size	6 mm	
Water Required for Casting	35-40%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	33	--
Fe ₂ O ₃ :	4.70	6.0 Max
CaO :	11	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	0.98	1.00 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	20	15 Min
Fired at 800°C/3hrs.	10	6 Min
Fired at 1100°C/3hrs	15	10 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+14	14/1398 Min
Permanent Linear Change (%)		
Fired at 800°C/3hrs.	-0.30	± 0.60 Max
Fired at 1000°C/3hrs.	-0.55	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.24	-
At 500°C	0.26	0.28 Max
At 800°C	0.28	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 10 S

Brand Name: -	MMP INSULCAST 10 S	
Type	Medium Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Exfoliated Vermiculite	
Max Service Temp.	1100 °C	
Max Grain Size	6 mm	
Water Required for Casting	40-46%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	33.80	--
Fe ₂ O ₃ :	3.50	6.0 Max
CaO :	15	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.05	1.10 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	25	20 Min
Fired at 800°C/3hrs.	18	15 Min
Fired at 1200°C/3hrs	15	12 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	13/1350	12/1337 Min
Permanent Linear Change (%)		
Fired at 800°C/3hrs.	-0.06	± 0.80 Max
Fired at 1000°C/3hrs.	-0.60	± 1.20 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.19	-
At 500°C	0.21	0.22 Max
At 800°C	0.22	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 11 Li

Brand Name: -	MMP INSULCAST 11 Li	
Type	Medium Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1350 °C	
Max Grain Size	6 mm	
Water Required for Casting	30-35%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	43.50	--
Fe ₂ O ₃ :	1.20	1.50 Max
CaO :	8.30	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.23	1.25 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	50	45 Min
Fired at 800°C/3hrs.	40	30 Min
Fired at 1100°C/3hrs	35	30 Min
Fired at 1300°C/3hrs	55	50 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+14	15/1398 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	-0.10	± 0.20 Max
Fired at 1300°C/3hrs.	-0.70	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.30	-
At 500°C	0.32	0.34 Max
At 800°C	0.36	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 11 Liz

Brand Name: -	MMP INSULCAST 11 Liz	
Type	Medium Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1300 °C	
Max Grain Size	6 mm	
Water Required for Casting	40-45%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	43.80	--
Fe ₂ O ₃ :	1.10	1.20 Max
CaO :	10.00	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	0.98	1.00 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	20	15 Min
Fired at 800°C/3hrs.	14	10 Min
Fired at 1100°C/3hrs	12	08 Min
Fired at 1300°C/3hrs	18	15 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+14	15/1398 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	-0.10	± 0.20 Max
Fired at 1300°C/3hrs.	-0.90	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.19	-
At 500°C	0.21	0.22 Max
At 800°C	0.23	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 11

Brand Name: -	MMP INSULCAST 11	
Type	Medium Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1300 °C	
Max Grain Size	6 mm	
Water Required for Casting	25-35%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	34.50	--
Fe ₂ O ₃ :	3.30	3.50 Max
CaO :	10.30	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.23	1.25 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	40	35 Min
Fired at 800°C/3hrs.	35	25 Min
Fired at 1100°C/3hrs	30	25 Min
Fired at 1300°C/3hrs	45	40 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+14	14/1398 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	0.15	± 0.20 Max
Fired at 1300°C/3hrs.	0.50	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.27	-
At 500°C	0.30	0.31 Max
At 800°C	0.32	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 13 Li

Brand Name: -	MMP INSULCAST 13 Li	
Type	Moderate Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1400 °C	
Max Grain Size	6 mm	
Water Required for Casting	25-30%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	44.20	--
Fe ₂ O ₃ :	1.30	1.50 Max
CaO :	8.10	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.43	1.45 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	90	80 Min
Fired at 800°C/3hrs.	50	40 Min
Fired at 1100°C/3hrs	45	40 Min
Fired at 1300°C/3hrs	60	50 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+15	15/1430 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	-0.10	± 0.20 Max
Fired at 1300°C/3hrs.	-0.60	± 0.80 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.35	-
At 500°C	0.38	0.40 Max
At 800°C	0.41	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 13

Brand Name: -	MMP INSULCAST 13	
Type	Moderate Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1350 °C	
Max Grain Size	6 mm	
Water Required for Casting	25-30%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	39.0	--
Fe ₂ O ₃ :	3.00	3.50 Max
CaO :	11.00	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.43	1.45 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	55	50 Min
Fired at 800°C/3hrs.	40	30 Min
Fired at 1100°C/3hrs	35	30 Min
Fired at 1300°C/3hrs	60	50 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+14	14/1398 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	0.05	± 0.20 Max
Fired at 1300°C/3hrs.	0.50	± 0.80 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.30	-
At 500°C	0.32	0.33 Max
At 800°C	0.35	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 15 Li

Brand Name: -	MMP INSULCAST 15 Li	
Type	Moderate Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1400 °C	
Max Grain Size	6 mm	
Water Required for Casting	23-28%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	45.70	--
Fe ₂ O ₃ :	1.30	1.50 Max
CaO :	8.00	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.58	1.60 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	140	130 Min
Fired at 800°C/3hrs.	90	75 Min
Fired at 1100°C/3hrs	80	75 Min
Fired at 1300°C/3hrs	110	90 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+15	15/1430 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	-0.10	± 0.20 Max
Fired at 1300°C/3hrs.	-0.50	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.38	-
At 500°C	0.42	0.44 Max
At 800°C	0.44	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 15

Brand Name: -	MMP INSULCAST 15	
Type	Moderate Density Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate	
Max Service Temp.	1350 °C	
Max Grain Size	6 mm	
Water Required for Casting	23-28%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	39.5	--
Fe ₂ O ₃ :	2.50	3.20 Max
CaO :	11.0	--
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.58	1.60 Max
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	100	90 Min
Fired at 800°C/3hrs.	70	60 Min
Fired at 1100°C/3hrs	65	60 Min
Fired at 1300°C/3hrs	80	70 Min
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+15	15/1430 Min
Permanent Linear Change (%)		
Fired at 1100°C/3hrs.	0.05	± 0.20 Max
Fired at 1300°C/3hrs.	0.50	± 1.00 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.39	-
At 500°C	0.42	0.44 Max
At 800°C	0.45	-

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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Product Datasheet

MMP INSULCAST 22 Li

Brand Name: -	MMP INSULCAST 22 Li (AS PER MIDREX Specification)	
Type	Low Iron Insulating Castable	
Nature of Bond	Hydraulic	
Installation	Tamping	
Raw Material Base	Insulating Aggregate & Perlite	
Max Service Temp.	1250 °C	
Max Grain Size	6 mm	
Water Required for Casting	35-40%	
Chemical Analyses: - (%)	Typical	Specification
Al ₂ O ₃ :	49.6	45 to 50
Fe ₂ O ₃ :	0.90	0.5 to 1.3
CaO :	32.0	30 to 40
Physical Properties: -		
B. D (gm/cc) Drying at 110°C/24 hrs.	1.10	0.96 to 1.12
Cold Crushing Strength (Kg/cm²):		
Drying at 110°C/24 hrs.	97	80-100
Fired at 540°C/3hrs.	65	60-70
Fired at 815°C/3hrs	64	60-63
Fired at 1093°C/3hrs	55	53-56
Thermal Properties: -		
Refractoriness, Orton / 0 °C	+15	15/1430 Min
Permanent Linear Change (%)		
Fired at 815°C/3hrs.	-0.10	-0.9 Max
Fired at 1093°C/3hrs.	-0.53	-1.10 Max
Thermal Conductivity, Kcal/m/ hr/°C		
At 300°C	0.24	0.24-0.25
At 500°C	0.28	0.27-0.30
At 800°C	0.30	0.30-0.32

Packing: 25 Kg Bags

Storage Life: 9 Months

Delivery State: Dry

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